What is claimed is:

1) An aptamer that binds to PDGF comprising a sequence selected from the group consisting of SEQ ID NO:1 to SEQ ID NO:3, SEQ ID NO:9 to SEQ ID NO:38, SEQ ID NO:50, SEQ ID NO:54 to SEQ ID NO:90, and SEQ ID NO:94 to SEQ ID NO:99.

2) An aptamer that binds to PDGF comprising a sequence containing less than seven nucleotides having a 2' fluoro substituent.

3) An aptamer comprising a first sequence capable of binding to a first target and a second sequence capable of binding to a second target.

4) The aptamer of claim 3, wherein the first target is selected from the group consisting of PDGF, PDGF-isoforms, and PDGF receptor and the second target is selected from the group consisting of VEGF and VEGF receptor.

5) The aptamer of claim 4, comprising a sequence selected from the group consisting of SEQ ID NO:1 to SEQ ID NO:3, SEQ ID NO:9 to SEQ ID NO:38, SEQ ID NO:50, SEQ ID NO:54 to SEQ ID NO:90, and SEQ ID NO:94 to SEQ ID NO:99.

6) The aptamer of Claim 4, wherein the PDGF isoforms are PDGF AA, PDGF BB, PDGF AB, PDGF CC, and PDGF DD.

7) The aptamer of claim 3, wherein said first target does not upon binding of the aptamer stimulate an immune response and further wherein said second target does upon binding of the aptamer stimulate an immune response.

8) The aptamer of claim 7, wherein said second target is selected from the group consisting of toll-like receptors.

9) The aptamer of claim 3, wherein said second sequence is an immunostimulatory sequence.

10) The aptamer of claim 9, wherein the immunostimulatory sequence is a CpG motif.

11) The aptamer of claim 9, wherein the first sequence is capable of binding to a target selected from the group consisting of PDGF, IgE, IgE Fcε R1, PSMA, CD22, TNF-alpha, CTLA4, PD-1, PD-L1, PD-L2, FcRIIB, BTLA, TIM-3, CD11c, BAFF, B7-X, CD19, CD20, CD25, and CD33.

12) The aptamer of claim 9, wherein the first sequence is capable of binding to PDGF.

13) A composition comprising an aptamer according to any of claims 1 through 12 and a pharmaceutically acceptable carrier.

14) A composition comprising an aptamer according to any of claims 1 through 12, a cytotoxic agent and a pharmaceutically acceptable carrier.

15) The composition of claim 14, wherein the cytotoxic agent belongs to a class of cytotoxic agents selected from the group consisting of tubulin stabilizers, tubulin destabilizers, anti-metabolites, purine synthesis inhibitors, nucleoside analogs, DNA alkylating agents, DNA modifying agents, and vascular disrupting agents.

16) The composition of claim 14, wherein the cytotoxic agent is used alone or in combinations of one or more cytotoxic agents selected from the group consisting of calicheamycin, doxorubicin, taxol, methotrexate, gemcitabine, cytarabine, vinblastin, daunorubicin, docetaxel, irinotecan, epothilone B, epothilone D, cisplatin, carboplatin, and 5-fluoro-U.

17) A composition comprising an aptamer according to claim 1, an aptamer that binds to VEGF and a pharmaceutically acceptable carrier.

18) The composition of claim 17 further comprising a cytotoxic agent.

19) The composition of claim 18, wherein the cytotoxic agent belongs to a class of cytotoxic agents selected from the group consisting of tubulin stabilizers, tubulin destabilizers, anti-metabolites, purine synthesis inhibitors, nucleoside analogs, DNA alkylating agents, DNA modifying agents, and vascular disrupting agents.

20) The composition of claim 18, wherein the cytotoxic agent is used alone or in combinations of one or more cytotoxic agents selected from the group consisting of calicheamycin, doxorubicin, taxol, methotrexate, gemcitabine, cytarabine, vinblastin, daunorubicin, docetaxel, irinotecan, epothilone B, epothilone D, cisplatin, carboplatin, and 5-fluoro-U.

21) A method of treating cancer comprising the step of administering a therapeutically effective amount of an aptamer according to any of claims 1 through 12.

22) A method of treating cancer comprising the step of administering a therapeutically effective amount of a composition according to any of claims 13, 14 and 18.

23) The method of claim 22, wherein the cytotoxic agent belongs to a class of cytotoxic agents selected from the group consisting of tubulin stabilizers, tubulin destabilizers, anti-metabolites, purine synthesis inhibitors, nucleoside analogs, DNA alkylating agents, DNA modifying agents, and vascular disrupting agents.

24) The method of claim 22, wherein the cytotoxic agent is used alone or in combinations of one or more cytotoxic agents selected from the group consisting of calicheamycin, doxorubicin, taxol, methotrexate, gemcitabine, cytarabine, vinblastin, daunorubicin, docetaxel, irinotecan, epothilone B, epothilone D, cisplatin, carboplatin, and 5-fluoro-U.

25) A method of inhibiting growth of a tumor comprising the step of administering a therapeutically effective amount of an aptamer according to any of claims 1 through 12.

26) A method of inhibiting growth of a tumor comprising the step of administering a therapeutically effective amount of a composition according to any of claims 13, 14 and 18.

27) The method of claim 26, wherein the cytotoxic agent belongs to a class of cytotoxic agents selected from the group consisting of tubulin stabilizers, tubulin destabilizers, anti-metabolites, purine synthesis inhibitors, nucleoside analogs, DNA alkylating agents, DNA modifying agents, and vascular disrupting agents.

28) The method of claim 26, wherein the cytotoxic agent is used alone or in combinations of one or more cytotoxic agents selected from the group consisting of calicheamycin, doxorubicin, taxol, methotrexate, gemcitabine, cytarabine, vinblastin, daunorubicin, docetaxel, irinotecan, epothilone B, epothilone D, cisplatin, carboplatin, and 5-fluoro-U.

29) A method of reducing IFP in a solid tumor comprising the step of administering a therapeutically effective amount of an aptamer according to any of claims 1 through 12.

30) A method of reducing IFP in a solid tumor comprising the step of administering a therapeutically effective amount of a composition according to any of claims 13, 14 and 18.

31) The method of claim 30, wherein the cytotoxic agent belongs to a class of cytotoxic agents selected from the group consisting of tubulin stabilizers, tubulin destabilizers, anti-metabolites, purine synthesis inhibitors, nucleoside analogs, DNA alkylating agents, DNA modifying agents, and vascular disrupting agents.

32) The method of claim 30, wherein the cytotoxic agent is used alone or in combinations of one or more cytotoxic agents selected from the group consisting of calicheamycin, doxorubicin, taxol, methotrexate, gemcitabine, cytarabine, vinblastin, daunorubicin, docetaxel, irinotecan, epothilone B, epothilone D, cisplatin, carboplatin, and 5-fluoro-U.

33) A method of increasing the permeability of a solid tumor to cytotoxic agents comprising the step of administering a therapeutically effective amount of an aptamer according to any of claims 1 through 12.

34) A method of increasing permeability of a solid tumor to cytotoxic agents comprising the step of administering a therapeutically effective amount of a composition according to any of claims 13, 14 and 18.

35) The method of claim 34, wherein the cytotoxic agent belongs to a class of cytotoxic agents selected from the group consisting of tubulin stabilizers, tubulin destabilizers, anti-metabolites, purine synthesis inhibitors, nucleoside analogs, DNA alkylating agents, DNA modifying agents, and vascular disrupting agents.

36) The method of claim 34, wherein the cytotoxic agent is used alone or in combinations of one or more cytotoxic agents selected from the group consisting of calicheamycin, doxorubicin, taxol, methotrexate, gemcitabine, cytarabine, vinblastin, daunorubicin, docetaxel, irinotecan, epothilone B, epothilone D, cisplatin, carboplatin, and 5-fluoro-U.

37) A method of reducing constitutive expression of platelet derived growth factor in a tumor comprising the step of administering a therapeutically effective amount of an aptamer according to any of claims 1 through 12.

38) A method of reducing constitutive activation of platelet derived growth factor in a tumor comprising the step of administering a therapeutically effective amount of a composition according to any of claims 13, 14 and 18.

39) The method of claim 38, wherein the cytotoxic agent belongs to a class of cytotoxic agents selected from the group consisting of tubulin stabilizers, tubulin destabilizers, anti-metabolites, purine synthesis inhibitors, nucleoside analogs, DNA alkylating agents, DNA modifying agents, and vascular disrupting agents.

40) The method of claim 38, wherein the cytotoxic agent is used alone or in combinations of one or more cytotoxic agents selected from the group consisting of calicheamycin, doxorubicin, taxol, methotrexate, gemcitabine, cytarabine, vinblastin, daunorubicin, docetaxel, irinotecan, epothilone B, epothilone D, cisplatin, carboplatin, and 5-fluoro-U.

41) A method of reducing angiogenesis and neovascularization in a solid tumor comprising the step of administering a therapeutically effective amount of an aptamer according to any of claims 1 through 12.

42) A method of reducing angiogenesis and neovascularization in a solid tumor comprising the step of administering a therapeutically effective amount of a composition according to any of claims 13, 14 and 18.

43) The method of claim 42, wherein the cytotoxic agent belongs to a class of cytotoxic agents selected from the group consisting of tubulin stabilizers, tubulin destabilizers, anti-metabolites, purine synthesis inhibitors, nucleoside analogs, DNA alkylating, and DNA modifying agents.

44) The method of claim 42, wherein the cytotoxic agent is used alone or in combinations of one or more cytotoxic agents selected from the group consisting of calicheamycin, doxorubicin, taxol, methotrexate, gemcitabine, cytarabine, vinblastin, daunorubicin, docetaxel, irinotecan, epothilone B, epothilone D, cisplatin, carboplatin, and 5-fluoro-U.

45) The method of any one of claims 21 through 44 wherein said cancer or tumor is PDGF mediated cancer or tumor.

46) The method of any one of claims 21 through 44 wherein said PDGF mediated cancer or tumor is selected from the group consisting of glioblastomas, chronic myelomonocytic leukemia, dermafibrosarcoma protuberans, gastrointestinal stromal tumors and soft tissue sarcomas.